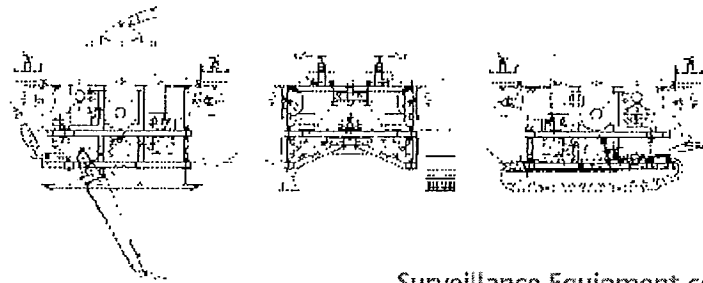
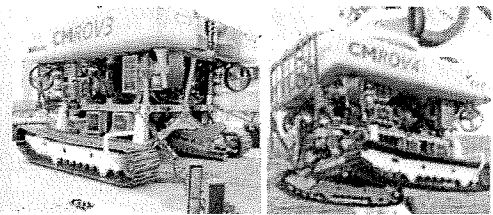


# Cable Maintenance ROVs 3 & 4

## Technical Specification



### Particulars

Length	3.8m
Width	3.7m (track modules attached) 3.2m (skids attached)
Height	2.7m
Configuration	Free-swimming / Tracked un-garaged vehicle
Total Power	300kW
Maximum Depth Rating	1000m CMR3 2000m
Hydraulic Power Unit	1x 300kW 4 pole 3.3kV electro hydraulic unit
Horizontal Thrusters	4 x 420mm dia. SubAtlantic thrusters
Vertical Thrusters	4 x 380mm dia. SubAtlantic thrusters
Thruster Control	By combined variable swash hydraulic motor and servo valve to each thruster.
Max. Forward Thrust	1100kg
Max. Vertical Thrust	800kg
Submerged Weight	Nominally buoyant (with skids) 600kg (with tracks)
Weight in Air (approx.)	7400kg (with skids) 8500kg (with tracks)
Speed (with skids attached)	3.2 knots fore & aft 1.5 knots vertical

### Soil Type

Clay	Su to 40kPa
Sand	All types

### Surveillance Equipment

Cameras (PAL)	2 x CCD monochrome (Osprey OE1358) 1 x CCD colour with zoom (Osprey OE1366) 1 x SIT Camera (Osprey OE1324)
Pan & Tilts	2 x SubAtlantic 0058-MAS Pan & Tilt
Lamps	8 x 150W dimmed in pairs

### Surveillance Equipment cont.

Echosounder	Mesotech MS 1007-974
OA Sonar	Mesotech 974 Digital Head
Heading Sensor	Solid state attitude (pitch & roll) and heading reference
Acoustic Positioning	Facility for 2 x responders
Cable Tracker	TSS Dual Track (TSS340/TSS350)

### Cable Tools Package

Manipulators	1 x Schilling Orion 7R 1 x Schilling 5R
Cable Cutter	Webtool HCV100
Cable Clamp	Slingsby TA 17

### Cable Burial Tool

Trenching Configuration	Forward mounted twin jet lags with multiple low pressure water jets. Water is supplied from multiple water pumps through stainless steel piping to minimise losses.
Water Pumps	2 x Variable speed hydraulically driven single stage water pumps
Maximum Jet Pressure	Approx. 5 Bar
Maximum Flow Rate	Approx. 1000m <sup>3</sup> /hr
Depth Control	0 - 1500mm
Width Control	100 - 400mm (between jet legs)

### ROV Handling system

A-Frame	
SWL	10te up to Sea State 6
Weight	33te with Docking Head (approx.)
Launch & Recovery (LARS) Umbilical Winch	
Length	3.4m
Width	3.5m
Height	3.2m
Weight	21te with Umbilical

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C/S Ile de Re

C/S Ile de Brehat

ROV systems

Plough

Grapple types

Side Scan Sonar

References

About Us

Side Scan Sonar

The system consists of 3 main components:

Model DF-1000 digital underwater towfish incl. towable

Digital control unit (DCU)

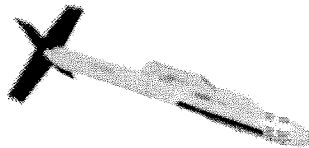
ISIS Data acquisition and image processing system

The **DF 1000** Tow fish is a towed body which contains the transducers and electronic necessary to generate and receive the sidescan sonar signals, and communicate with the topside unit (DCU).

The **DCU** is a topside command and control unit that interfaces between the sidescan processor and the tow fish. It is the modem that communicates with the subsea unit and provides power to it.

The **ISIS system** is designed to acquire, process and store multiple channels of sidescan sonar data. ISIS will also acquire and store navigation, towfish altitude information, depth and magnetic data.

The whole setup provides a very high-resolution plan view of the seafloor below. Locates hazards and obstructions in proposed cable routes and can track installed cable lines. Used for quick location and identification of surface faults.

**DF-1000 Towfish****Features**

Dual simultaneous 100/500kHz operation

Sonar signals digitized in towfish

High speed digital uplink

12 bit high resolution sonar images

Single coaxial towable

1000 meter depth rating

Built in compass for towfish heading

Acoustic responder option

24 kHz sampling

Pitch and roll (optional)

**DCU****Features**

300dB maximum attenuation at 1 MHz

Digital output port available

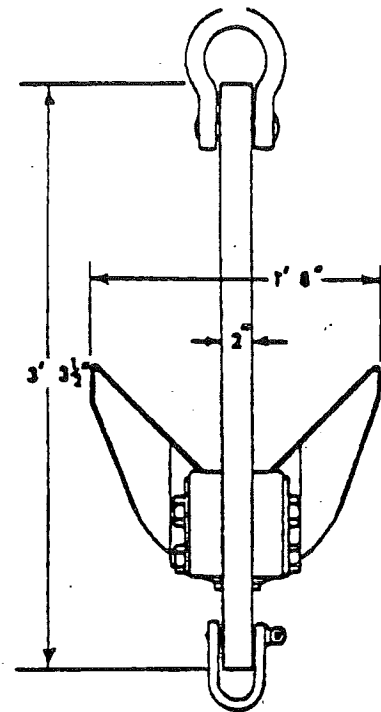
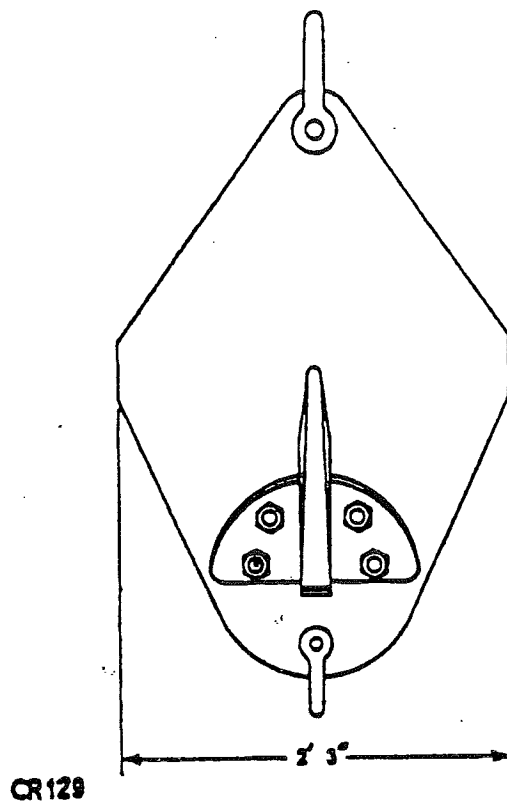
Works with cable lengths up to 3000 meters

Typical Grapnels Used In  
Cable Installation and Repair

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Weight in Air: 4.5 cwt.

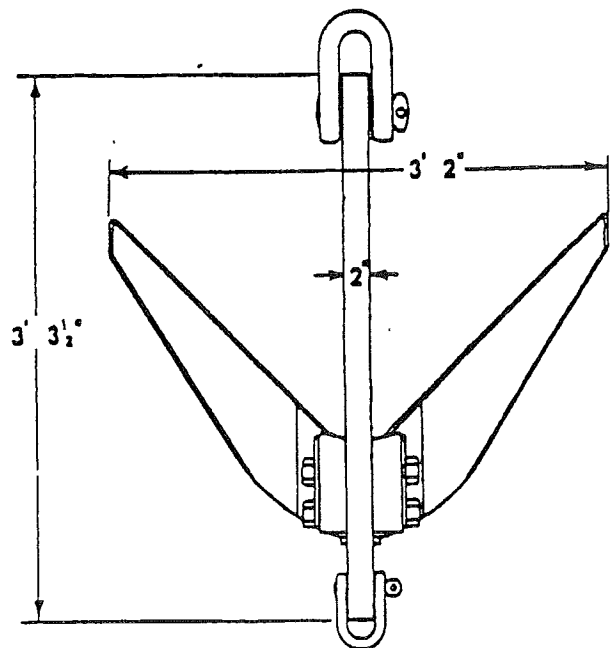
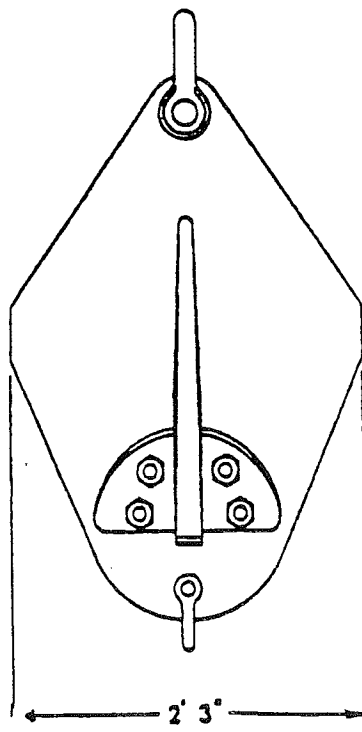
Weight in Water: 3.93 cwt.



FLAT FISH : Long Prong

Weight in Air: 5.25 cwt.

Weight in Water: 4.58 cwt.



Weight in Air:

Weight in Air:

Shank:

208 lb.

6-prong grap:

3.62 cwt.

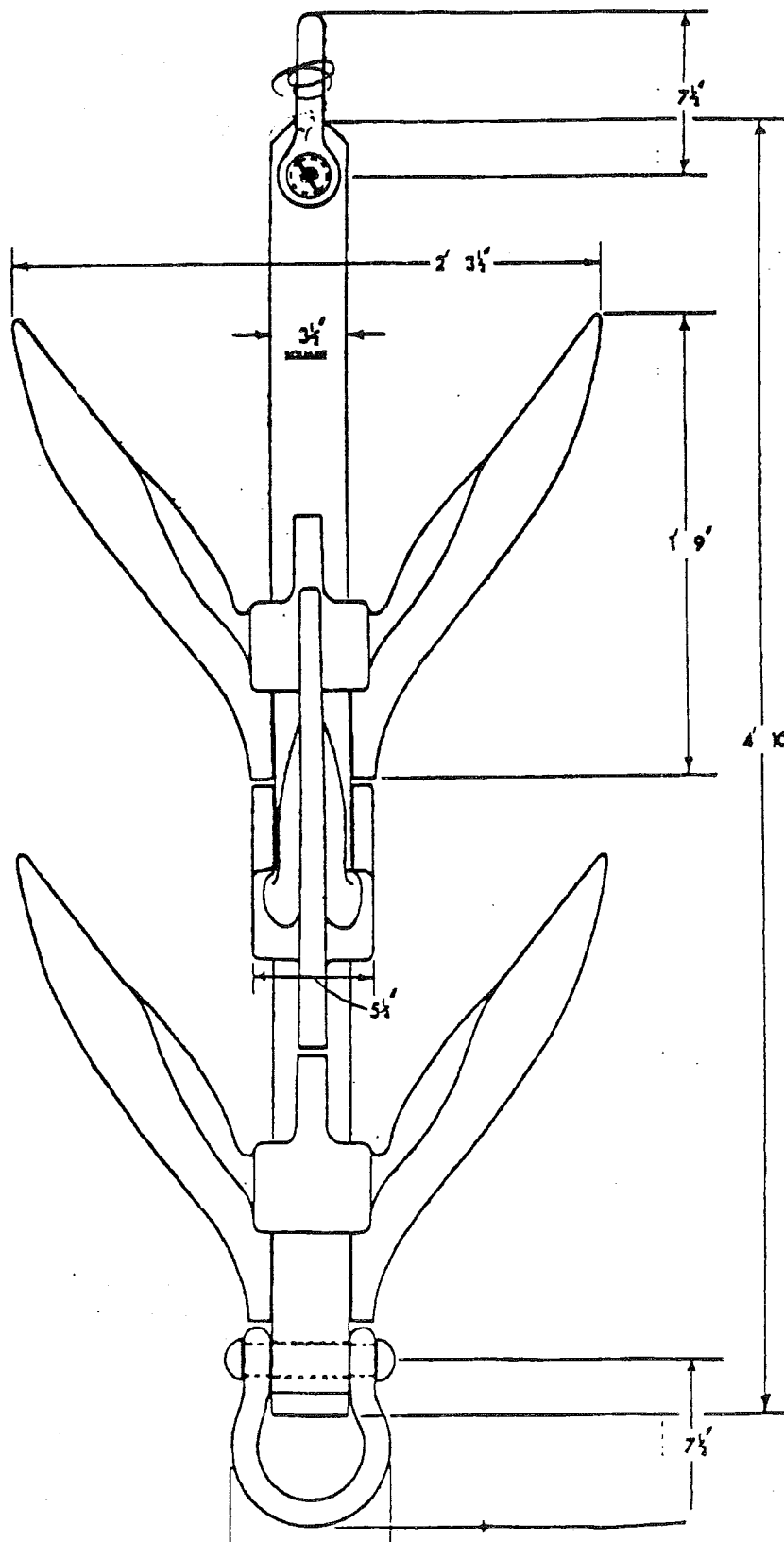
Each double prong:

66 lb.

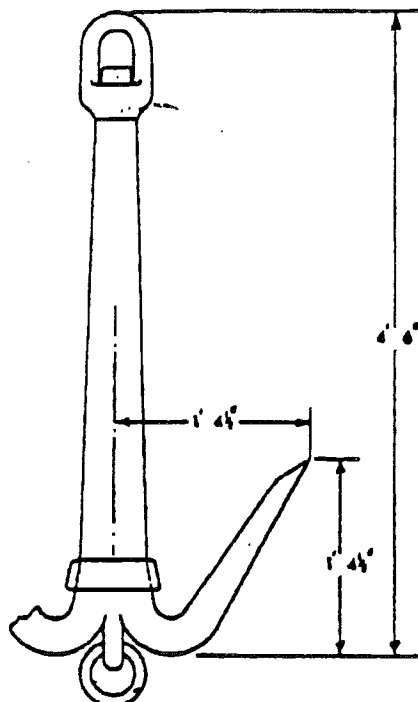
Weight in Water:

6-prong grap:

3.16 cwt.



**ROUND BOTTOM : Short Prong**



Weight in Air:

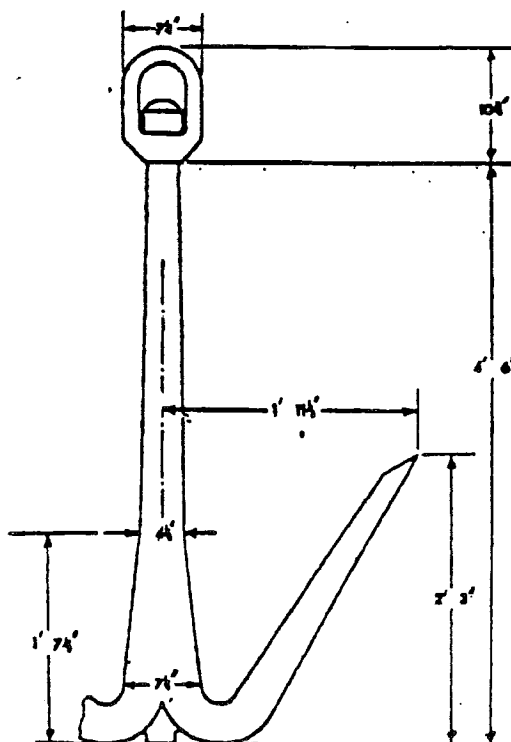
3.5 cwt.

Weight in Water

3.05 cwt.

CR 131

**ROUND BOTTOM : Long Prong**



Weight in Air:

4.5 cwt.

Weight in Water:

3.93 cwt.

